

DETAILED ACTION

1. This communication is responsive to the application filed 05/02/2005 and the Preliminary Amendment filed 05/02/2005.

Claims 1-45 are presented for examination.

Information Disclosure Statement

2. The Applicants' Information Disclosure Statements filed 05/02/2005 and 08/09/2006 have been received, entered into the record, and considered. A copy of PTO 1449 form is attached.

Drawings

3. The drawings filed 05/02/2005 are accepted by the examiner.

Specification

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 USC § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-45 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 21: the phrase “*may be*” renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The resulting claim does not clearly set forth the metes and bounds of the patent protection desired. The use of similar exemplary language “for example” or “such as” was found to be indefinite in the following cases: Ex parte Hall, 83 USPQ 38 (Bd. App. 1949); Ex parte Hasche, 86 USPQ 481 (Bd. App. 1949); Ex parte Steigerwald, 131 USPQ 74 (Bd. APP. 1961).

Dependent claims 22-45 are rejected for fully incorporating the deficiencies of their base claim.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-45 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites a “*telecommunication system*”. However, as currently recited the “*system*” comprises only computer software elements. Thus, the claim is a program per se and does not fall within any of the four enumerated categories of patentable subject matter in section 101.

For the same reasons discussed supra with respect to independent claim 1, claims 2-20 fall outside the scope of § 101.

Claim 21 recites a *method* comprising steps that may be performed mentally and/or manually by a human being. Thus, the recited method is not tied to a particular machine or apparatus. Additionally, none of the recited steps transform a particular article into a different state or thing. Accordingly, the recited method is nonstatutory subject matter.

For the same reasons discussed supra with respect to independent claim 21, claims 22-45 fall outside the scope of § 101.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-45 are rejected under 35 U.S.C. 102(e) as being anticipated by **Slaughter et al.**
(US 7398533 B1).

As to claim 1:

Slaughter teaches a telecommunications system arranged for providing client service applications with access to service capability features via a standardized interface (Col.11, lines 39-60), the system comprising:

- a number of application servers providing client service applications (Col.14, line 58-Col.15, line 17);

- a number of first service enablers where first service capability features are specified in a first network domain (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51);
- a first Framework for providing a controlled access to said first service capability features (Col.18, lines 17-58; Col.21, lines 9-30; and Col.39, line 51-Col.40, line 9);
- a number of core network elements (Col.7, lines 18-48);
- a number of second service enablers where second service capability features are specified in a second network domain (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51);
- a second Framework for providing a controlled access to said second service capability features (Col.18, lines 17-58; Col.21, lines 9-30; and Col.39, line 51-Col.40, line 9);
- wherein said first Framework is arranged for communicating with said second Framework for accessing said second service capability features specified in said number of second service enablers of said second network domain (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51).

As to claim 2:

Slaughter teaches the first and second Frameworks comprise protocol means for allowing a framework-to-framework communication (Col.66, lines 11-25 and Col.78, lines 15-44; see also Fig.29).

As to claim 3:

Slaughter teaches said protocol means includes means for advertising toward a first framework in a first network domain the existence of a second framework in a second network domain with which service capability features can be shared (Col.66, lines 11-25 and Col.78, lines 15-44; see also Fig.29).

As to claim 4:

Slaughter teaches said protocol means includes means for advertising from a second framework in a second network domain towards a first framework in a first network domain that service capability features can be offered from service enablers of said second network domain to client applications of said first network domain (Col.66, lines 11-25 and Col.78, lines 15-44; see also Fig.29).

As to claim 5:

Slaughter teaches the means for advertising towards a first framework the existence of a second framework includes means for the second framework registering itself in the first framework (Col.40, lines 10-35; Col.76, lines 39-59; Col.77, lines 38-57; and Col.105, lines 6-15).

As to claim 6:

Slaughter teaches the means for advertising towards a first framework in a first domain the existence of a second framework in a second domain includes means for the operator of said first domain registering the second framework in the first framework (Col.40, lines 10-35; Col.76, lines 39-59; Col.77, lines 38-57; and Col.105, lines 6-15).

As to claim 7:

Slaughter teaches the means for advertising service capability features that can be offered from service enablers of a second network domain includes means for notifying from a second framework in said second network domain towards a first framework in a first network domain at least one element of service information selected from a group of elements that comprises: service identifier, service type, service availability, service properties and service interface (Col.66, lines 11-25 and Col.78, lines 15-44; see also Fig.29).

As to claim 8:

Slaughter teaches the means for advertising the existence of service capability features available at service enablers of a second network domain includes means for creating, from a first framework in a first network domain toward a second framework in a second network domain, criteria for notification of such element of service information (Col.66, lines 11-25 and Col.78, lines 15-44; see also Fig.29).

As to claim 9:

Slaughter teaches means for carrying out security management mechanisms between a first framework in a first network domain and a second framework in a second network domain (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51).

As to claim 10:

Slaughter teaches the means for carrying out security management mechanisms between said first and said second frameworks includes means for capturing service agreements between first and second domains, the service agreements representing a policy applied between said first and second domains (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51).

As to claim 11:

Slaughter teaches the means for carrying out security management mechanisms between said first and said second frameworks includes means for handing over service assertions and signatures (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51).

As to claim 12:

Slaughter teaches means for discovering service capability features available at service enablers of a second network domain between a first framework in a first network domain and a second framework in a second network domain (Col.34, line 45-Col.35,

line 51).

As to claim 13:

Slaughter teaches the means for discovering available service capability features between said first framework and said second framework includes means for negotiating specific capabilities as required by a client application in a first domain (see Figs. 11a and 26a and the associated text).

As to claim 14:

Slaughter teaches means for returning from a second framework in a second network domain towards a first framework in a first network domain a reference to a service instance created at a service enabler of said second network domain, for allowing an application in the first network domain make use of corresponding service of the second network domain (see Figs. 19 and 20 and the associated text).

As to claim 15:

Slaughter teaches a Service Enabler Proxy interposed between a first domain and a second domain and intended for acting as a Proxy for service requests from applications in the first domain toward service enablers of the second domain as well as communications in the opposite direction (Col.18, lines 14-23 and Col.28, lines 13-38).

As to claim 16:

Slaughter teaches said Service Enabler Proxy is provided in a first domain and comprises a number of dedicated service capability features of said first domain for storing references of corresponding service capability features of a second domain (Col.18, lines 14-23 and Col.28, lines 13-38).

As to claim 17:

Slaughter teaches means for creating a Service Enabler Proxy automatically in the first domain based on information received from a framework in a second domain, said information including at least one element of service information selected from a group of elements that comprises: service type, service properties and service interface (Col.18, lines 14-23 and Col.28, lines 13-38).

As to claim 18:

Slaughter teaches means for downloading source code or run-time code from the second domain intended to create a Service Enabler Proxy in the first domain (Col.20, lines 38-64 and Col.29, lines 18-33).

As to claim 19:

Slaughter teaches a particular service enabler of a second domain is registered in a first framework of a first domain for acting as a Service Enabler Proxy towards a second

domain (Col.18, lines 14-23 and Col.28, lines 13-38).

As to claim 20:

Slaughter teaches the first network domain includes a Home core network of a user whereas the second network domain includes a Visited core network where the user is roaming (Figs. 28-30 and the associated text).

As to claim 21:

Slaughter teaches a method of providing client service applications with access to service capability features via a standardized interface (Col.11, lines 39-60), the method comprising the steps of:

- (a) registering first service capability features in a first network domain with a first Framework and second service capability features in a second network domain with a second Framework (Col.40, lines 10-35; Col.76, lines 39-59; Col.77, lines 38-57; and Col.105, lines 6-15);
 - (b) carrying out security management mechanisms for authentication and authorization of a number of players selected from a group that includes user, network, a requester application, and combinations thereof, in each network domain through each respective Framework (Col.18, lines 17-58; Col.21, lines 9-30; and Col.39, line 51-Col.40, line 9);
- and

(c) discovering first service capability features that are available for use by a requester application in said first network domain (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51);

(d) determining in the first network domain that service capability features at a second network domain may be available for the requester application (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51);

(e) carrying out security management mechanisms for authentication and authorization from a first Framework of said first network domain, through a second Framework of said second network domain (Col.18, lines 17-58; Col.21, lines 9-30; and Col.39, line 51-Col.40, line 9); and

(f) discovering second service capability features that are available for use by said requester application in said second network domain (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51).

As to claim 22:

Slaughter teaches the step of determining that service capability features are available at a second network domain includes a step of requesting to the first Framework in the first network domain for an access to the second service capability features available in the second network domain for the requester application.

As to claim 23:

Slaughter teaches the step of determining that second service capability features are available at a second network domain includes a step of receiving such information from a first service capability feature selected in the first network domain.

As to claim 24:

Slaughter teaches the step of discovering second service capability features that are available in the second network domain comprises a step of negotiating capabilities from the first Framework of the first network domain with the second Framework of the second network domain (see Figs. 11a and 26a and the associated text).

As to claim 25:

Slaughter teaches the step of negotiating capabilities includes a step of creating an instance of a selected service capability feature at a service enabler of a second domain, and a step of returning back a reference to such instance from the second Framework of the second network domain to the first Framework of the first network domain (see Figs. 11a and 26a and the associated text).

As to claim 26:

Slaughter teaches a step of registering a second Framework of a second network domain with a first Framework of a first network domain (Col.40, lines 10-35; Col.76, lines 39-59; Col.77, lines 38-57; and Col.105, lines 6-15).

As to claim 27:

Slaughter teaches the step of registering frameworks includes a step of registering the second Framework itself in the first Framework, and another step of registering the first Framework itself in the second Framework (Col.40, lines 10-35; Col.76, lines 39-59; Col.77, lines 38-57; and Col.105, lines 6-15).

As to claim 28:

Slaughter teaches the step of registering frameworks includes a step where the operator of a second (Donor) network domain registers a first Framework of a first network domain in a second Framework, and another step where the operator of a first network domain registers a second Framework of a second network domain in a first Framework (Col.40, lines 10-35; Col.76, lines 39-59; Col.77, lines 38-57; and Col.105, lines 6-15).

As to claim 29:

Slaughter teaches a step of publishing at least one interface that allows said first and said second Frameworks to access the service capability features respectively controlled by each other (Figs. 17-20 and the associated text).

As to claim 30:

Slaughter teaches a step of exchanging information between a first and a second Framework about available service capability features in a first and a second network

domain respectively, with or without explicit indication of the interface required to access such service capability features (Figs. 17-20 and the associated text).

As to claim 31:

Slaughter teaches a step of indicating to at least one first service capability feature in a first network domain the at least one second service capability feature available in a second network domain, and vice versa (Figs. 17-20 and the associated text).

As to claim 32:

Slaughter teaches a step of capturing Service Level Agreements between the network operator of a network domain and a service provider of a requester application (Figs. 17-20 and the associated text).

As to claim 33:

Slaughter teaches a step of capturing Service Level Agreements between a first and a second network domains through corresponding first and second Frameworks (Figs. 17-20 and the associated text).

As to claim 34:

Slaughter teaches said Service Level Agreements are extended between second domains and first domains in a telecommunication network with multiple domains, the method further comprising the steps of: creating and assigning a Federation Service Profile on a

Donor Framework; signing a Federation Service Agreement on a Donor Framework; installing in a Receiver Framework necessary information about a Donor Service for a client application being able to discover the Donor Service; and requesting a Receiver Application Service Agreement within the bounds of a Federation Service Agreement from a Donor Framework (Figs. 17-20 and the associated text).

As to claim 35:

Slaughter teaches a Receiver Application Service Agreement serves as a partition of a Federation Service Agreement (Figs. 17-20 and the associated text).

As to claim 36:

Slaughter teaches the steps of carrying out security management mechanisms include the steps of handing out and handing over an Assertion that gives a practitioner the right to use a service in a federated framework setup (Col.16, lines 8-45 and Col.34, line 45-Col.35, line 51).

As to claim 37:

Slaughter teaches handing over an Assertion by a Receiver Framework to any other entity; signing an Agreement about the hand-out and/or hand-over of an Assertion; requesting an Assertion; and a Donor Service Enabler checking the validity of a received Assertion with a Donor Framework (Figs. 17-20 and the associated text).

As to claim 38:

Slaughter teaches a step of creating in a first domain a Service Enabler Proxy arranged to act as a proxy for communicating with an instance of a selected second service capability feature at a service enabler of the second domain (Col.20, lines 38-64 and Col.29, lines 18-33).

As to claim 39:

Slaughter teaches a step of enforcing service agreements and policies at the Service Enabler Proxy (Col.20, lines 38-64 and Col.29, lines 18-33).

As to claim 40:

Slaughter teaches the step of creating a Service Enabler Proxy in a first Framework of a first network domain includes a step of obtaining service information at the first network domain from a second network domain for least one element of service information selected from a group of elements that comprises: service type, service properties and service interface (Col.20, lines 38-64 and Col.29, lines 18-33).

As to claim 41:

Slaughter teaches the step of creating a Service Enabler Proxy in a first Framework of a first network domain includes a step of downloading source code or run-time code from a second domain (Col.20, lines 38-64 and Col.29, lines 18-33).

As to claim 42:

Slaughter teaches the step of downloading source code or run-time code includes a step of downloading local policy enforcement rules (Col.20, lines 38-64 and Col.29, lines 18-33).

As to claim 43:

Slaughter teaches the step of creating a Service Enabler Proxy in a first Framework of a first network domain includes a step of registering a Service Enabler of a second domain in the first Framework of the first domain where both domains are allowed to set-up agreements and policies that need to be enforced by the Service Enabler (Col.40, lines 10-35; Col.76, lines 39-59; Col.77, lines 38-57; and Col.105, lines 6-15).

As to claim 44:

Slaughter teaches a Service Enabler Proxy is created by the first Framework for each client application (Col.20, lines 38-64 and Col.29, lines 18-33).

As to claim 45:

Slaughter teaches the step of creating a Service Enabler Proxy in a first Framework of a first network domain includes a step of creating instances of said Service Enabler Proxy for each client application (Col.20, lines 38-64 and Col.29, lines 18-33).

Conclusion

8. The prior art made of record, listed on PTO 892 provided to Applicant is considered to have relevancy to the claimed invention. Applicant should review each identified reference carefully before responding to this office action to properly advance the case in light of the prior art.

Contact Information

9. Any inquiry or a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM-6:00PM. The examiner can also be reached on alternative Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HYUNG S. SOUGH can be reached at (571) 272-6799.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194